

SELF-INKING HAND STAMP

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The invention relates to a self-inking hand stamp with upper impact inking comprising a stamp housing in which a stamp aggregate is arranged that is capable of moving from an inking position on an ink pad to a stamping position, and with an actuating frame and a reversing mechanism being associated with said stamp aggregate for said purpose, whereby the actuating frame, the latter being comprised of a top side, two broad sides opposing one another, as well as two narrow sides opposing one another, is mounted on the upper part of the stamp housing in the form of a cap. The actuating frame comprises two legs resting laterally on the stamp housing for actuating the stamp aggregate. Said actuating frame can be pressed down against in relation to the stamp housing against spring force and is provided with a receiving recess located at the top side for accommodating an information sheet, with a transparent cover being associated with said recess that is mounted on the receiving recess in a detachable manner.

Such self-inking hand stamps comprising a cap-like actuating frame offer the advantage of a compact and handy construction as compared to stamps having an upwardly projecting handle mounted on the top side of the actuating frame - compare, for example US 4,432 281 A, on the one hand, or AT 1271 U, as well as US 4,823,696 A on the other.

It is common practice also in conjunction with such self-inking hand stamps with a cap-like actuating frame to accommodate an information sheet on the top side of the cap in a sight window that displays the respective stamp imprint to be produced, in order to inform the user about the respective stamp imprint when using a multitude of stamps. Provision is usually made for a transparent cover with a more or less plane surface, which is snapped on to the actuating frame above the recess for receiving the information sheet. However, it has been found in practical life that users frequently require additional information, whereby, for example company information, information relating to various departments within a company, advertising data and similar information are desired. As a way out, provision has been made for actuating frames in different colors conforming to different departments in a company, for example such as hand stamps with plastic actuating frames dyed in black, blue and red. In addition, it has become customary to glue labels to the broad sides of the upper components of the actuating frame such as, for example labels containing the information ``department X''. On the other hand, it has been proposed also to make provision for receiving recesses for accommodating labels on the two broad sides of the actuating frame instead of on the top side in order to accommodate information labels in such recesses - compare AT 380 836 B. However, these various proposals all have been found to be not satisfactory in

practical life; however, they were obviously accepted because with self-inking hand stamps with cap--shaped actuating frames of the specified type, only these designs were viewed as useful in view of the accommodation of the stamp housing with elastic support of the actuating frame in a compact, ``squat'' type of construction, and this in spite of the fact that it has been known since a longer time from DE 1 136 720 C to place a label on the head of the handle of a hand stamp that extended from the top side to the narrow sides and possible also up to the broad sides of the head of the grip, with a cap attached to the top that enclosed the head of the handle on all sides. However, the hand stamp involved was one without a self-inking system, so that no components had to be accommodated in the interior of the handle, and, furthermore, no provision was made for receiving recesses on the head of the handle for accommodating the labels, which were simply inserted under the generally square cap. Such a cap poses only few problems with a hand stamp without a self-inking system in spite of the instability it causes when stamp imprints are produced because no moving components are present; however, in connection with self-inking stamps such a cap may lead to an only inadequate stamp imprint that even may be smudgy under certain circumstances.

Therefore, the problem of the invention was to provide a self-inking hand stamp of the type specified above that

offers in an integrated form the possibility to easily and safely accommodate additional information apart from a sample of the respective stamp imprint, without causing the manufacture and assembly of the components of the stamp to require more expenditure, and without impairing the production of stamp imprints.

The self-inking hand stamp of the type specified above as defined by the invention is accordingly characterized in that the receiving recess continuously extends with lateral limitation towards the narrow sides from the top side of the actuating frame up to at least one broad side of the actuating frame; and that the transparent cover is designed curved accordingly, arching from the top side to at least one broad side, and realized in the form of one single piece.

Owing to the fact that the receiving recess extends not only over the top side but also over at least across one broad side of the top part of the actuating frame, it is possible to accommodate in addition to the information on the top side also information on the at least one broad side, whereby such accommodation is preferably realized in that a suitably sized information sheet is inserted in the receiving recess that extends both across the top side and also across the area of the receiving recess located on the broad side of the actuating frame, displaying in this

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connection the stamp imprint, for example on the top side, whereas information about the company or company department, advertising information etc. is contained within the area of the broad side. Such an arrangement has no adverse effects with respect to the manufacture of the hand stamp because the receiving recess can be formed without problems with the specified expanse in the course of manufacture of the actuating frame, for example from plastic by injection molding. It is possible in a similar manner to produce the transparent cover in a curved instead of the more or less plane form, particularly by injection molding as well, using a transparent plastic, and it is basically possible also to fix the cover in the usual manner by locking or snapping it on. It is accordingly possible to keep the manufacture of the components of the hand stamp and the assembly of the latter within the framework used heretofore. In particular, it continues to be possible without problems to mount one or more springs between the top side of the stamp housing and the inner side of the actuating frame below the receiving recess. The strength of the actuating frame is not impaired by the recess that continues to extend over at least one broad side because the edges of the recess located adjacent to the narrow sides act as reinforcing ribs, which, during stamping, permits to an adequate extent the transmission of force especially to said area of the narrow side, where the legs of the actuating frame establish the connection to the stamp aggregate.

In view of an information surface area that is as large as possible, as well as also in view of a symmetrical design that facilitates the manufacture, it was found that it is particularly favorable if the receiving recess extends with a generally U-shaped cross section up to both broad sides of the actuating frame, and if the transparent cover has a substantially U-shaped, curved cross section. Also with such an embodiment, no changes are basically required in the structure and during the assembly of the hand stamp, and its handling is not impaired.

For mounting the transparent cover by simply snapping or locking it on, provision can be advantageously made that the transparent cover has locking projections located on its inner surface along the edge, for locking the cover in locking recesses located on the edge of the receiving recess. Provision is usefully made for at least one locking projection on the at least one broad side, and for a locking projection on the opposite edge on the top side, but preferably on the other broad side if the receiving recess extends toward both broad sides, whereby the cover is shaped in a suitable form or with initial tension, so that it is attached to the receiving recess and snapped on with elastic deformation. For safely securing the transparent, curved cover on the actuating frame, it is useful in this connection if a strip-like, center locking projection is

molded onto each of the edges of the transparent cover, with a corresponding, oblong locking window located on the respective edge of the receiving recess being associated with such a locking projection.

Furthermore, it is favorable for simplified mounting of the information sheet if the locking projections on the inner surface of the transparent cover form at the same time a holding means for fixing the information sheet. In such an embodiment, the information sheet is first inserted in the cover, curving accordingly, and the cover together with the information sheet is subsequently snapped onto the actuating frame.

In order to obtain a defined space for receiving the information sheet, or an arrangement of the transparent cover with a spacing from the bottom of the receiving recess, and to nonetheless permit compact and fixed mounting of the cover, it is advantageous also if the receiving recess is embodied with at least one support protrusion located on the edge side for supporting the edge of the transparent cover. It was found that it is particularly useful in this connection if provision is made in the receiving recess within the area of the edge of the broad side for a shoulder-like support protrusion that extends adjacent to the narrow sides up to the top side, with its height close to zero.

In view of the snap-on attachment of the transparent cover and an elastic deformation of said cover without the risk of breaking it, and in order to make provision for a relatively plane substrate in the interest of good readability of the information sheet, such substrate being formed by the bottom of the receiving recess, it is advantageous, furthermore, if the top side of the receiving recess, as the area of the broad sides, extends in a slightly curved manner at the most, as compared to the arched transparent cover.

Finally, for the manufacture and as also for the deformation, it is favorable if the transparent cover is curved both in the transverse and longitudinal directions.

The invention is explained in greater detail in the following with the help of preferred exemplified embodiments shown in the drawing; however, without being limited to such exemplified embodiments. In the drawing,

FIG. 1 is a schematic view of a self-inking hand stamp comprising an actuating frame mounted on the stamp housing in the form of a cap.

FIG. 2 shows a vertical section through said hand stamp according to line II-II in FIG. 1.

FIG. 3 shows a corresponding vertical section through the upper part of said hand stamp, shown, however, by an exploded representation of the transparent cover, an information sheet, and the actuating frame with the receiving recess provided on the latter for receiving the information sheet.

FIG. 4 shows on a larger scale a sectional view of the detail IV of FIG. 3 within the area where the cover is locked on the actuating frame.

FIG. 5 shows a comparative sectional detailed view of an area outside the locking site for illustrating a shoulder-like support protrusion for supporting the transparent cover; and

FIG. 6 shows by a partial view similar to FIG. 1 the upper part of a modified self-inking hand stamp.

FIGS. 1 and 2 show a self-inking hand stamp with upper impact inking, which is overall denoted by 1. Said hand stamp comprises a stamp housing 2, in which a stamp aggregate 3 is movably arranged in the conventional manner per se. Said stamp aggregate 3 is shown in FIG. 2 in the upper normal or inking position, resting on an ink pad 4 in a pad drawer 5 pushed into a receptacle in the stamp housing

2. From said upper position, the stamp aggregate 3 can be moved down and swiveled at the same time by 180°, so that it is capable of producing an imprint on the respective document with its printing side 6 through the lower opening 7 of the stamp housing 2. For such actuation of the stamp, provision is made for an actuating frame 8 mounted with its top part on the stamp housing 2 in the way of a cap. Said actuating frame is comprised of the two legs 9, 10 (see FIG. 1) that slide along the two narrow side walls, for example 11 in FIG. 2, of the stamp housing while being in connection with the stamp aggregate 3 through a vertical guide slot 12 via the pins or axles 13. For reversing the stamp aggregate 3, provision is made in the conventional manner on the inner side of the side walls 11 for suitable control cams that cooperate with corresponding stop means provided on the stamp aggregate 3, as shown in FIG. 2 at 14, which overall results in a reversing mechanism (12, 13, 14) of the type known per se.

Within the cap-like top part of the actuating frame 8, a pressure spring 15 is arranged between the stamp housing 2 and the actuating frame 8. Said pressure spring forces the actuating frame 8 into the upper normal or inking position shown. The pressure spring 15 is supported in this connection on the top side of the stamp housing 2, on the one hand, as well as on the inner surface of the actuating frame 8 on its top side 16 on the other.

On said top side 16 of the actuating frame 8, a receiving recess 17 for accommodating an information sheet 18 is shaped by molding in the dish- or cap-shaped top part on the outer side, whereby said receiving recess 17 extends continuously with a U-shaped cross section on both broad sides 19, 20 of the actuating frame 8, up to about half of the height of the cap-shaped top part, and is limited there as well as toward the narrow sides of the actuating frame 8 by an edge. Substantially three coherent information surfaces or information recesses are obtained in this way, namely a top information surface 21 as well as the two information surfaces 22 and 23 on the broad sides. For covering the receiving recess 17 or the information sheet 18 inserted therein, provision is made for a dish-shaped transparent cover 24, which has a substantially U-shaped cross section, see FIG. 2, and in particular also FIGS. 3 and 4. Said cover is simply snapped onto the actuating frame 8.

For said purpose, the locking projections 25 are shaped by molding on the two broad sides 19 and 20 in the center on the edge of the cover 24 on the inner side, see in addition to FIG. 1 also FIGS. 3 and 4. Said locking projections are capable of engaging the corresponding locking recesses 26 located on the edge of the receiving recess 17 of the actuating frame 8. In the exemplified embodiment according

to FIGS. 1 to 5, each locking projection 25 - and correspondingly the window-like locking recess 26 - is shaped oblong or in the form of a strip, as particularly shown by the representation in FIG. 1, and said locking elements 25, 26 are arranged in the center of the broad sides 19 and, respectively, 20. The locking windows 26 adjoin the shoulder-like support protrusions 27 on the edge side. Said support protrusions can be seen in FIG. 1 for the one broad side 19 - see also the representation in FIG. 5, which shows a section similar to FIG. 4, but in a site next to the locking elements 25, 26, and whose height adjacent to the narrow sides of the frame comes close to zero toward the top side 16. Furthermore, an information sheet 18 inserted in the receiving recess 17 is shown in FIGS. 4 and 5 by the dash-dotted line. For mounting it with the cover 24 removed, said information sheet 18 is first inserted in said cover 24 on the inside - see the arrow and the dashed representation of the information sheet 18 within the cover 24 in FIG. 3, whereby the locking projections 25 also serve as means for holding the information sheet 8. Subsequently, the cover 24 together with the information sheet 18 is placed on top of the actuating frame 8, whereby the locking projections 25 snap into the locking windows or the general locking recesses 26. This causes the information sheet 18 to be more flatly pressed against the bottom of the receiving recess 17, whereby the receiving recess 17, as shown not only in FIG. 3 but also in FIG. 2, is more plane in the two broad-

side information areas 22, 23 as well as in the information area 21 at the top side, as compared to the cover 24 having a cross section with a more pronounced curvature.

The cover 24 may have a convex curvature also in the longitudinal direction (see FIG. 1) in order to permit it to adapt itself to the contour of the actuating frame 8 in a superior manner, and to, furthermore, permit it to snap in more forcefully with elastic initial tension. Furthermore, as shown in FIG. 2, the two broad-side legs of the dish-shaped cover 24 with the U-shaped cross section may be shaped slightly converging downwards, and the shape of the cross section of the cover 24 may be approximately semi-circular. As opposed thereto, the receiving recess 17 has an almost rectangular shape, disregarding the rounded corners in the area of transition from the broad sides 19 and 20 to the top side 16, where the cover 24 comes close the bottom of the receiving recess 17 on the inner side - see FIG. 2.

FIG. 6 shows an embodiment of a self-inking hand stamp that is modified as compared to the one shown in FIG. 1 in that in FIG. 6, the transparent cover 24 is snapped on on each broad side, for example 19, of the actuating frame 8 with the help of the two locking projections 25a, 25b that are arranged more to the side, said locking projections engaging the corresponding locking recesses 26a, 26b located on the edge of the receiving recess 17. In the present case,

too, the locking projections 25a, 25b again can be used as means for mounting the information sheet 18, as explained above with the help of FIG. 3.

Another possibility for locking the cover 24 on the edge of the receiving recess 17 would be to make provision for an at least partially undercut edge of the receiving recess 17 or cover 24. However, it has been found that it is then relatively difficult to remove the cover 24 from the actuating frame 8, so that the embodiment with the locking projections 25 and locking windows 26 described above was found to be more favorable. Another possible modification of the described self-inking hand stamp consists in that the receiving recess 17 is provided on only one broad side, for example 19, as well as on the top side 16, i.e. on the other broad side 20, the fastening point for securing the cover 24 on the actuating frame 8 would be shifted upwards into the ``corner area'', viewed in the cross section, as it is schematically indicated in FIG. 3 at 28. Viewed in the cross section, an approximate L-shape would accordingly be obtained for the receiving recess 17 or the cover 24 instead of the U-shape.